



Illinois Department of Transportation

Memorandum

To: DIRECTORS, DEPUTY DIRECTORS, AND BUREAU CHIEFS
From: Dianna L. Taylor
Bureau Chief of Personnel Management
Subject: Technical Vacancy/**RECRUITMENT**
Date: February 19, 2016

Attached are the Position Summary Sheet and Position Description for the vacant technical position listed below. Please post this vacancy announcement February 22, 2016 in the designated areas.

The deadline for applicants to submit their names for consideration is **4:30 p.m. on Friday, March 4, 2016**. Applicants will not be accepted after that time and date.

NOTE: Official college transcripts must be included with application. Applicants possessing an Engineer Intern License must also include a copy with application. Applicants not submitting these documents by the posting deadline will not be considered for employment. Please include IPR number on the application.

All applicants will receive a position description for the position they are applying for. If you have any questions, please contact Denise Hamilton or Jennifer Sunderland at 217/782-5594.

CET (4 pos) Structural Design & Review Engineer Trainee
Bureau of Bridges & Structures
Highways
Springfield

Attachments
40825

Technical Applications (PM 1080) **must be received** by the Bureau of Personnel Management, Room 113, 2300 South Dirksen Parkway, Springfield, IL 62764 (Fax# 217/557-3134) by **Friday, March 4, 2016, 4:30 p.m.** Please include address, daytime phone and position for which applying if not already listed on application. Applicants will be notified in writing to schedule interviews. **NOTE: Official college transcripts must be included with application.**
Applicants possessing an Engineer Intern License must also include a copy with application.
Applicants not submitting these documents by the posting deadline will not be considered for employment. Please include IPR number on the application.



Illinois Department of Transportation

An Equal Opportunity Employer

Position Summary Sheet

Classification:	Civil Engineer Trainee (4 positions)/RECRUITMENT	Salary Range:	\$4,275 - \$4,655
Position Title:	Structural Design & Review Engineer Trainee	Union Position:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Position Number:	PW110-23-50-904-20-01	IPR#:	40825

Office/Central Bureau/District/Work Address:

Division of Highways/Bureau of Bridges & Structures/2300 S. Dirksen Parkway, Springfield, IL

Description Of Duties:

This position assists in the structural analysis and detailed design required for the production of structural contract plans utilized in the construction of simple bridge and traffic structures, and for the review of simple construction shoring, bracing, and temporary structure designs prepared by contractors.

Special Qualifications:

The following criteria is required:

- Bachelor of Science in Civil Engineering from an ABET accredited university prior to date of employment or must be a Licensed Engineer Intern in the State of Illinois (includes those expecting to graduate Spring 2016)
- Minimum 2.5 cumulative GPA in engineering related courses (If GPA is between a 2.0-2.5, candidate must have passed Fundamentals of Engineering Exam)
- Official college transcripts must be included with application. (Official transcripts indicating graduation date for Spring 2016 graduates must be provided at time of hire.)

The following criteria is desired:

- Strong oral and written communication skills

Shift/Remarks:

8:00 am – 4:30 pm / Monday – Friday

THIS IS AN ENTRY-LEVEL POSITION

**ILLINOIS DEPARTMENT OF TRANSPORTATION
POSITION DESCRIPTION**

DATE:	July 2015	POSITION:	Structural Design & Review Engineer Trainee
APPROVED BY:	Jayme Schiff	OFFICE/DIVISION:	Division of Highways/Bureau of Bridges and Structures
CODE:	PW110-23-50-904-20-01	REPORTS TO:	Structural Design and Review Group A Engineer

Position Purpose

This position assists in the structural analysis and detailed design required in the production of structural contract plans utilized in the construction of simple bridge and traffic structures, and for the review of simple construction shoring, bracing, and temporary structure designs prepared by contractors.

Dimensions

Annual Projects:	3
Contract Value:	\$1,500,000.

Nature and Scope

This position reports to the Structural Design & Review Group Engineer as do the Senior Structural Design & Review Engineer, the Structural Design & Review Engineer, the Associate Structural Design & Review Engineer, and the Assistant Structural Design & Review Engineer. No subordinates report to this position.

This position operates in an environment of performing the structural analysis and design for simple structures while exercising sound engineering judgement and displaying knowledge of structural engineering theory. The incumbent also reviews, analyzes, and recommends approval/disapproval of shoring, bracing, and temporary structure designs submitted by contractors.

Typical problems faced by the incumbent include the resolution of simple engineering problems and the utilization of learned structural theory to practical applications in structural design. The greatest challenge faced by the incumbent is utilizing his/her technical knowledge to design and analyze simple types of structures which incorporate all departmental design policies, are cost effective and are structurally sound.

The incumbent is personally responsible for determining the various types of loads which will be applied to structures including the dead loads, live loads, truck impacts, truck brakings and centrifugal forces, wind loads, thermal forces, earth pressures, buoyancies, shrinking loads, ice pressures, and earthquake forces. The incumbent calculates internal forces including the moments, shears, and axial loads of each individual structural member. S/He determines the size of structural members, performs fatigue analysis, and calculates deflections. S/He prepares design details, unique design notes, geometry, and quantity calculations. S/He also directs and approves the preparation of final design plans. The incumbent assists in field investigations in order to evaluate structural problems and reviews designs prepared by others to ensure completeness and structural adequacy.

The incumbent must refer to his/her superior for guidance in design methods and accepted design details, policies, specifications, and procedures. The incumbent is guided by AASHTO specifications and current interim specifications and applicable departmental policies.

The incumbent has contact with other Units within the Section and other Sections within the Bureau.

Structural Design & Review Engineer Trainee
Division of Highways/Bureau of Bridges & Structures

The effectiveness of this position can be measured by the structural and analytical expertise displayed in analysis and design of projects and the incumbent's ability to solve structural engineering problems in the office and in the field and by the timely completion of assigned projects.

Principal Accountabilities

1. Develops and analyzes simple structure designs which incorporate current methods and technology.
2. Performs design computations required in the preparation and review of structural contract plans.
3. Reviews structure designs prepared by others for completeness and structural adequacy.
4. Reviews and recommends approval/disapproval of contactor proposals for shoring, bracing, and temporary structures.
5. Assists in performing field investigations.
6. Performs duties in compliance with departmental safety rules. Performs all duties in a manner conducive to the fair and equitable treatment of all employees.
7. Performs other duties as assigned.